THE EDUCATOR.

"Promote, then, as an object of primary importance, institutions for the general diffusion of knowledge."—WASHINGTON.

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NORMAL SCHOOLS.

The Massachusetts Common School Journal of February 1st contains an interesting article under this head, detailing the recent proceedings of the Board of Education in regard to the establishment of Normal Seminaries.

After noticing the munificent donation of Edmund Dwight Esq. of Boston and the Act of the Legislature accepting the donation on the terms under which it was made the Editor proceeds—

"The Board was now possessed of the sum of twenty thousand dollars; but how inadequate is such a sum towards supplying the wants of a State, in which, during the preceding year, there had been employed in the *public schools, twenty-three hundred and seventy male, and thirty-five hundred and ninety-one* female teachers.

Here such questions as these arose; "Shall the Board concentrate its efforts and expend its funds upon a single school? "Shall they attempt to engraft a department for the qualification of teachers, upon academies in different parts of the State?" "Shall they attempt to obtain the coöperation of public spirited individuals, and establish private institutions, in the centres of convenient sections of the Commonwealth?" Perhaps no one of these suggestions was so decidedly superior to the others, as to preclude all difference of opinion on their relative eligibility. The questions were to be decided, not less on a comparison of the weight of objections against each, than on the arguments in favor. If but one were established, its success could be known but to the citizens of a small part of the Commonwealth; and it was desirable that an experiment, in which the whole people has a direct interest, should be tried in presence of the whole people. If existing academies were selected and a new department engrafted upon them, this department would be but a secondary interestin the school;—the teachers would not be selected, so much with reference to the incident as to the principal object; and as the course of instruction, proper to qualify teachers, must be essentially different from a common academical course, it would be impossible for any preceptor duly to superintend both. Let there be one department of business for one man and make him responsible for its success, is a good maxim, when it can be applied. The proposition to establish as many as three schools, one at some convenient place for the North-eastern part of the State, another for the middle or Western section, and a third for the South-eastern, seemed, on the whole, to be most eligible. But an insuperable objection to this course, so far as it regarded the means of the Board, was a "plentiful lack" of supplies. The expenditure of twenty thousand dollars could hardly have given the Board ownership of three adequate and sufficient establishments for the intended purpose; and even if it could, all the means intrusted to them for educating teachers, would have been exhausted in acquiring a place to carry on the work. Fine buildings, excellent locations, the Board might have; but how, without funds, could the school be afterwards sustained? What teacher would assume the risk of being remunerated for his services by the amount of tuition? The teachers of all such schools would have to be elected as honorary members with liberty to reside elswhere and attend to their own employments.

But might not something be expected from individual liberality, from social aid? Were there not men, residing in different sections of the Commonwealth, who had deeply pondered the subject of educating a free people in such a manner that they would be worthy of freedom and able to maintain it; were there not men, who saw, how, like a moulder's hand, human institutions give shape to human character; men, who thought more of the intellectual and moral condition in which they should leave their children, than of the length of their inventory of chattels and of lands; who foresaw that the general condition of the society, in which those children were to reside, ranked a thousand times higher in importance, than the amount of their patrimony?

Upon this thought, the Board caused due notice to be given to the friends of education in all parts of the Commonwealth, that until the whole fund in their hands should become pledged, they would undertake to establish, in any place, unobjectionable in point of locality, a school for the qualification of teachers, and would sustain the same for the space of three years, provided that suitable buildings, fixtures and furniture, together with the means of carrying on such school, (exclusive of the compensation of the teachers of the school,) could be obtained from private liberality and placed under the control of the Board.

In the course of the last season, offers, substantially complying with this proposition, were made to the Board from seven different towns in the State. Other towns also made generous propositions to the Board, with a view to become partakers of the bounty, which public and private liberality had placed at its control. Such a spirit of generosity, emanating from so many different points, could hardly have been anticipated. It is encouragement for the present; it is an augury of good for the future. The interests of education will not languish, confided to men animated by such a spirit.

To arrange preliminaries, correspondence and many visits to different places, in order to compare their relative eligibility, became necessary. This has rendered some delay inevitable. In a work, where the guide of no precedent could be obtained, where almost the whole ground was to be explored for the first time, great caution was the first requisite, otherwise, far more time might be lost in retracing steps incautiously taken, than would be consumed by previous and full deliberation, in projecting the true course to be pursued. In this country, we have no institutions of the kind, which can safely be adopted as a model. And the political and social differences between us and the European nations, where schools for the qualificaion of teachers have been founded, are so numerous and fundamental, that a transcript of their systems, without material modifications, would threaten failure, if adopted by us.

After an anxious comparison of all practicable plans, and a careful consideration of all the arguments preferred by different applicants, the Board decided to proceed so far as to establish, at least three schools, to be located respectively either in the North-eastern, the South-eastern, or middle sections of the State, and to be so located as to admit of a subsequent increase of the number, without interfering with those already established.

On a combined view of the offer and the situation, the town of Lexington was selected for the North-east division of the State; no other town being more favourably situated, or giving so much weight to its other claims by the liberality of its donation. Two substantial offers have been made from Worchester county; one from the town of Barre and another from that of Lancaster; and one of great generosity from New-Salem, in the county of Franklin. No offer of assistance was received from any place in the State further West than the town of New-Salem. On a carefull comparison of all the circumstances, bearing upon the relative eligibility of these three places the Board decided in favor of the town of Barre. The location of the third Normal School awaits the action of the friends of education, in the Western, or in the South-eastern part of the State."

Massachusetts has thus fairly commenced the work of educating Teachers. The experiment is about to be made in a portion of the Union peculiarly favorable to its success.—May that success be as great as its most sanguine friends anticipate and may other States speedily follow the noble example which has thus been set them. In regard to our ow State our opinion is, that the engrafting of Normal Semina ries on existing Colleges or the establishment of the Semina-

ry in the immediate vicinity of the College, so as to permi the pupils, to attend the lectures of the Professors of Mathematics, Natural and Moral Philosophy and the English language and literature, and thus secure without the expense of additional buildings, and Professors Salaries, the advantage of a thorough course of instruction to the future Teachers, is at once the most economical and efficient method. The funds at the disposal of the State are thus left at liberty to be applied to the purpose for which they are wanted, the support of the Teacher during the period of his attendance at the Seminary, and instead of one year, which is too short a period to be productive of any advantage, the course may be extended to at least two years. The Board of Education in Massachusetts appears to have thought that if engrafted on Academies the management of the Normal Seminary must necessarily be committed to the Principal of the Academy and the same preceptor superintend both.—This is by no means the plan for which we have been arguing. Our proposition is, that the instruction of the Normal pupils should be committed to a Professor of Education specially devoted to that purpose and that they shall merely attend the classes of the Professors in the College with which they are connected to acquire the necessary information, their special training being conducted by their own Professor.

BIOGRAPHICAL SKETCH

OF V. J. DUVAL.

The following narrative illustrates forcibly, the power of genius, in bursting the barriers thrown in its way; and may serve to encourage the efforts of many under less forbidding circumstances. Genius is not often found, but good talents abound every where, which by proper industry may become extensively useful.

Valentine Jameray Duvalwas born in 1685, in a little village called Artenay, in Champaign. When he was only ten years old he lost his father, a poor laborer, and who left his wife in a very destitute situation, burdoned with a young family, at a time when war and famine desolated France. This unhappy mother, who shed continual tears over her starving family, covered with rags, was more than once so reduced in her circumstances as to wish for the death of her children, as the greatest favor which Heaven could bestow. In this miserable family young Duval was accustomed to a life of hardships, with the privation even of the common necessaries of life. His poverty, however, did not extinguish in him the genius which he had received from nature, but served, on the contrary, to display that manly fortitude which he continually possessd to the last moment of his life. He was scarcely able to read, when, at the age of twelve, he entered into the service of a peasant of the same village, who set him to keep his turkeys. As he was of a very lively turn of mind, and always desirous of learning something, he took a fancy one day to try the truth of what he had often heard concerning turkeys, that they disliked any thing of a red colour. He took one of these turkeys, the largest in the fleck, and tied round his neck a piece of red cloth; on which the turkey began to shew his rage, struggled for a long time, and at last flew away. He continued his flight, till, exhausted with fatigue, he fell dead on the ground; but his master, little pleased with such an experiment, turned Duval from the house.—Duval having now no hope of finding another place in the village, and determining not to be a burden to his mother, took the resolution of seeking his fortune elsewhere.

It was in the beginning of the winter of 1709 the severest ever remembered in France, that he quitted his native village. Without effect, he went through several villages and hamlets to offer his services, and to find some asylum from the cold and hunger which pursued him. "As I went from Provins to Brie," says he in his Memoirs, "I was attacked with so violent a headach, that my head felt as if it would open every moment. Having reached the door of a farmhouse, I entreated the woman who opened it, to put me immediately into some place where I might warm myself, and lie down, to support more easily the intolerable pain which I suffered.

* * * * * * *

He then dercribes the kind treatment of the poor farmer—and the progress of his disease, which proved to be the small pox.

With his health entirely re-establiahed, poor Valentine Duval recommenced his journey, and saw on all sides the most horrid picture of misery. It was not till he had reached the village of Clesantine, upon the frontiers of Lorraine, that he met with a shepherd who received him into his service. He remained there two years; but being disgusted with this kind of life, he rambled, without knowing whither, till he arrived at the hermitage of La Rochette, near Deneuvre, at the foot of the mountains of Vosges. The hermit, who was known by the name of Brother Palemon received him kindly, made him participate in his rustic labors, and adopt his mode of life. The advantage which he derived from his abode in this hermitage, was that of learning to read. He did not remain there long; for he was under the necessity of giving his place to a hermit whose superiors had sent him to Brother Palemon; but who, to console Duval, gave him a recommendation to the hermits of St Anne, at some distance from La Rochette, and about a mile and a half from Luneville. The four solitaries who inhabited this retreat received him with kindness, and confided to him the care of six cows, that served them for the cultivation of a piece of ground consisting of about twelve acres, the produce of which aided by the milk and fruits of their little enclosures, was sufficient for their own sustenance, and enabled them to relieve the necessities of others. Duval, in his Memoirs, speaks with the highest praise of the virtue and piety of these hermits.—It was with them that he began seriously to instruct himself.

"I began," says he, "a new career—I learned to write. One of the old men traced the first elements of that ingenious art with a decrepid and trembling hand: a model so defective could not fail to produce a bad imitation. In order to avoid incommoding the good old man, and to do without his lessons, I devised this scheme. I took out of the window a pane of glass, and laying it upon my model, I wrote upon the surface the same letters which I saw beneath, and it was by the repetition of this exercise, that in a short time I learned to write a bad hand with sufficent facility. From an abridgment of arithmetic, which I found in an old book in the library, I taught myself the four rules. This admirable science, which, for the boldness of its calculations, diffuses the light of discussion even into the darkest regions of infinite numbers, was to me a source of amusement and pleasure. I selected a place in the woods proper for study, where I resorted very frequently, to meditate during a part of the fine nights of summer. One night, when I was amusing myself in considering the multitude of lights which are spread in the immensity of heaven, I remembered that the almanacs announced the certain days of the year that the sun entered into the signs, which are distinguished by names of animals, such as the ram, the bull, &c. I became desirous to know what they signified; and presuming that there was perhaps in the sky an assemblage of stars which represented the figures of animals, I made it the object of my speculations. I chose for that purpose the most elevated oak in the forest, and upon the summit of it I formed a sort of floor, composed of several branches, interwoven with hawthorn and willow, which, at a distance, appeared pretty much like a hawk's nest.

"Every evening I went to this observatory, where, seated upon an old bee-hive, or basket, I turned myself towards the different groupes of stars, among whom I endeavoured to discover the the figure of a bull or a ram. As the miracles of optics were yet unknown to me, my eyes were my telescope. After having long fatigued them in vain, I was on the point of giving up all farther study, when chance furnished me with notions more just, and reanimated my exertions.—Having been sent to Luneville, one day during the fair, I perceived a number of prints exposed to sale suspended along a wall. There was one in which the planets were represented, where the stars were mraked with their names, and their comparative magnitudes mentioned. This print, together with a map of the terrestrial globe, and maps of the four quarters of the world, exhausted all my finances, which then amounted to five shillings and ten pence. Misers, and such as are ambitious, would be almost excusable, if their predominant passion afforded them so lively and real a pleasure as that which the possession of these six sheets of paper afforded me. A few days were sufficient for me to comprehend on the chart the relative situation of the greater part of the constellations; but, in order to make a just application of this knowledge, it was necessary that I should have some fixed point in the heavens to serve as a basis to my observations. I had heard it said, that the polar star was the only one in our hemisphere which was invariable, and that its situation determined the arctic pole; but how was I to find that star, and to obtain ocular proof of its never shifting its position. After several inquiries, I heard of a steel needle, which had the virtue of always pointing towards the poles, a prodigy which I could hardly believe even when I saw it. Fortunately for me the oldest of the monks had a sea-compass, which he was so kind as to lend to me. By the help of this wonderful needle, the four opposite parts of the horizon, which are called the four cardinal points, soon made me acquainted with the different points of the winds which were engraven on the lower part of the compass; but as I was ignorant of the elevation of the polar star, and as it was necessary to ascertain this, I made use of the following method to acquire this information; I selected, what appeared to me to be a star of the third magnitude, and then pierced a hole through a branch of the tree, with a gimblet of a moderate size, directly opposite to this star. Which done, I reasoned thus: this star must either be fixed or not; if fixed, my point of observation is fixed

also, as I shall constantly see it through the hole that I have pierced, and so obtain what I am in search of. If it be not fixed, I shall soon cease to perceive it, and therefore must repeat my operations upon another star. This is only spending a little time, and perhaps breaking my gimblet;—which very accident obliged me to have recourse to another expedient.

"I took a twig of elder, which I split longitudinally, and, having taken out the neart, rejoined the two parts with a piece of pack-thread, and suspended the tube to the highest branch of the oak, which served me for an observatory. By this means, and the facility with which I could guide or fix this tube towards the different stars that I wished to observe, I at last arrived at the knowledge I had been seeking. It was now easy for me to find the situations of the different constellations, by drawing imaginary lines from one star to the other, according to the projection of my planisphere; by this I knew what idea to form of all those animals, with which the poets have peopled the firmament, perhaps for an equal number of human beings who might merit that honor.

"After having become pretty well acquainted with the map of the heavens, I thought it was necessary also that I should have some knowledge of the terrestial globe, more particularly of the lives of great men, such as Plutarch and Quintus Curtius have recorded, whose works chance had presented to me. Then the great feats of the knights errant, of whom I had read in the wonderful histories,commonly putinto the hands of children. Desirous therefore to know the cities, the kingdoms and empires, where these illustrious madmen had signalized themselves, I determined to follow their tract, but I soon found that I was in danger of becoming as mad as they had been. The only assistance I had for geography, was the five maps which I bought with the planisphere. I was ready to sink under the efforts which I made to comprehend the use of the circles traced upon the map of the world, such as the meridians, the tropics, the lines which mark the latitude, the zodiac, &c. Ignorance must certainly be very natural to man, since he has so much difficuly in freeing himself from it. I made a thousand conjectures, respecting what those three hundred and sixty little black and white parts which divided the equator could signify. At last I took them for leagues, and, without further hesitation, I concluded that the terrestrial globe was three hundred and sixty leagues in circumference. Having imparted this fine discovery to one of the monks, who had been at St Nicolas de Barry, in Calabria; he assured me, that to go thither, he had passed over three hundred and sixty leagues, without perceiving that he had gone round the world. I perceived by this how much I was in a mistake. I was mad with vexation and perhaps should have entirely given up the pursuit, had I not met with the following adventure."

To be Continued.

From the Connecticut Common School Journal.

IMPORTANCE OF INTRODUCTORY LESSONS IN GRAMMAR, &c.

"It is in vain, or almost in vain," said an old teacher, "to attempt to teach English Grammar as many do, by requiring the rules to be learnt and recited, and the book to be thus gone through, before parsing is commenced. On this plan I was treated, and thus I formerly taught. I have now a large school, containing more than one hundred boys; with several classes in grammer; and I teach them with far greater satisfaction to myself, because with greater success, and greater interest to them.

"I take care to give each class, and each pupil, at the outset, a clear apprehension of the nature of the branch entered upon, its utility, and the reasonableness of its rules. I find, by experience, that this can be done; and that, by pursuing a similar course in other cases of difficulty presented by the books, all parts of grammar are made intelligible, and in a good degree pleasing.

"For example, I ask a boy, or a class to look around the school room, and name some of the things which they see. They soon vie with each other in saying desk, bench, pen, &c. Then I say, names of thinge are sometimes called Nouns. Look round again, and give me a few more nouns. They add perhaps window, door, floor, stove, book, and boy. I say, these are common nouns, that is, each names a thing of some particular kind. There are many books, stoves and boys, in the world: and these nouns mean some one of each kind, but do not show which. How do you tell me which boy you mean? Then soon understood that they can most easily do it by calling his name. Then I tell them this is a proper noun: that is a name belonging to one particular person. Before I lead them to this distinction, however, I ussally introduce them pratically to the verb; and in some such way as this:

"Edward, we often use nouns: that is, we often name things. You speak of something or some body many times in a day. Why do you mention them? If you should say nothing further, would you tell any thing which others could understand? When I speak of a person or thing, I always say what it does or has done or will do; or what is or will be done to it. For instance, I do not say boy, and then stop; but I say perhaps that a boy is good or bad; or has been sent to his seat; or has learnt well, or will come or go or do something else by and by. Now such words as these, which mean doing or being, are very important, and are called verbs. Which of these words is a verb then? A horse runs. The dogs bark. How can you tell a verb from a noun?

"In this manner," said the teacher, "I proceed with other parts of speech, as occasion demands and opportunity permits. In similar ways also I illustrate the changes of case, mood, tense, &c., and thus the principles of Etymology and Syntax become known before the pupil comes to the rules in wnich those principles are embodied.

And, by methods equally natural, simple and interesting, we may add, a teacher who knows how, may lean a pupil over the threshold of every branch of education. The mind was never formed to be driven blindfold to knowledge. If it goes at all, it very naturally requires that it walk in the light. How important, then, is it, to communicate, in grammar, for example, ideas of the subject, the predicate and the classes of words which modify them! How important, at the same time, in attempting to convey such ideas, to avoid the confusion inevitably produced in the mind by an injudicious use of technical terms!

From the Franklin Farmer.

AGRICULTURAL SCHOOL.

Our readers will find from a letter copied from the New York Herald into this paper, that a proposition has been made by Congress, to invest the "Smithsonian legacy" as a fund for the support of a National Agricultural School. The *project* is supposed to have originated with Mr. Fleischman, a graduate of the Royal Agricultural School of Bavaria. The plan of the School, we think, is excellent: and we have no doubt its execution would result in the most substantial benefits to the agriculturists of the United States, for it looks to the accomplishment of all the substantial results to be expected from such an institution. We do not urge the endowment of such a school, however, merely because a fund has been gratuitously bequeathed to this government to be expended in the diffusion of useful knowledge; but on the ground solely, of the utility of the measure and the duty of Congress to adopt it. We care not a straw for the Smithsonian legacy or any other legacy; and if we did not believe that the government *ought* to endow an Agricultural School, we should not advocate it, even if the terms on which the legacy was bestowed required it. We go upon the ground, we repeat, of the utility of the institution and the duty of Congress to endow it. But here we shall doubtless be met with the question of the Federal *power* over the subject. We shall not argue the question with the metaphysical politicians; but will merely remark that, in our opinion, the *protection* and *defence* as well as the *prosperity* of the country, would be as well secured by the endowment of an Agricultural as a Military School. And at all events, we are perfectly assured in our own minds, that the *power* of endowing such a school is less questionable than that by which the "Exploring Expedition" was sent into unknown seas to pick up sone shells on the shores of barbarous islands. Now be it perfectly understood, that we neither doubt the utility of that measure nor the power of Congress to adopt it; but at the same time, we think it would have been far more wise, first to have explored the unknown resources of our *own country*. But we will here venture two opinions—first, that Congress will not appropriate a sum for the endowment of a National Agricultural School amounting to half the expense of the Exploring Expedition; and second, that Congress will expend more money in printing documents and listening to speeches and reports on the question of their power to establish such a school, than would be adequate to endow it. But if facts shall demonstrate the error of these opinions, we shall be rejoiced to acknowledge it.

But laying aside all unprofitable discussion as to the power of the General Government over the question, we may address ourselves to the State Government wholly upon the *expediency* of the measure. No one can question the power of the State over the subject, and the proposition of endowing agricultural schools is to them, one merely of expediency, utility and duty; and on the remaining points, there is no difference of opinion, at least in Kentucky, among the most intelligent friends of improved agriculture. But it remains to be seen how the representatives of the agricultural interests will acquit themselves of this duty. The plan of the school proposed to the Legislature of Kentucky is substantially the same as that presented to Congress.

PROGRESS OF FOREIGN LITERATURE.—The catalogue of books, published during the late Leipsic fair at Michaelmas, consists of nineteen sheets and contains the names of 3,400 finished works, and of 492 publishers who have issued them.

THE EDUCATOR.

EASTON, PA., FEBRUARY 14, 1839.

Two Travelling Agents, one for the Eastern and one for the Western part of the State are much needed. Our paper *must* be more extensively circulated and we *will* give liberal remuneration to suitable persons, if such can be procured. If any are willing let us hear from them.

Stationary Agents to whom payments may be made and through whom papers may be ordered.

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CHEMISTRY IMPORTANT TO A SCHOOL TEACHER.

Nothing but extreme ignorance, can produce the doubt, whether the science of chemistry be useful to agriculture. Any farmer who has seen lime applied as a manure; or plaster of Paris; or any thing else, might know, that he who understood the properties of these substances, would be able to apply them to the best advantage. Few farmers, in our vicinity, do not know that lime, in certain cases and in certain quantities, does injury. Now, is it not desirable to understand, before you burn up your land, what quantity of lime will be advantageous? and what injurious? And so of other manures? If therefore, the means of answering these questions was at hand, would not the farmer be greatly benefited? If he himself could analyse his own soil, and tell exactly how much it would bear, how greatly this would promote his interests?

Let him then procure a school teacher, who understands chemistry. Let that teacher be liberally supported, and let a part of his duties be to teach chemistry to the boys and girls: and analyse—that is examine the soil of each farm or part of a farm within his whole school district, so as to give the owner, the important information in question. In performing this analysis, the teacher would teach all his boys to do the same, and thus they would go forth with the requisite furniture, to prevent injuries and losses by mistakes. Should they enter upon new lands, different from those to which they had been accustomed they could guard against such losses. The farmer, meantime is delivered from harm and loss, and is enabled to use his materials to the best advantage. We feel confident that a school district, consisting of farmers, would save and make more in this way than would be required to support such a Teacher.

We publish an extract this week from, Professor Browne's learned and valuable Essay on the "Veterinary Art", and intend to add one or two in future. The whole Essay is well worthy the attention of our Terracultural readers. It shows great learning and research, and displays the importance of the subject in a strong light.

LABOR AND STUDY.

BY WM. A. ALCOTT.—*Extract.*

On the question, to what extent manual labor and teaching should be combined with a course of study, a volume might be written. There are objections to a union of labor and teaching both; but it has also its advantages. If only the health of the student is to be consulted, manual labor is indispensable; but if the pecuniary advantages are to be taken into the account, its importance is greatly enhanced; and with a view to the latter, teaching during vacation seems highly desirable. It appears that in about half the instances above mentioned, the same students engage in both kinds of labors. This, as we conceive, is quite too much. We do not believe one student in ten can pursue faithfully a course of manual labor and study during term time, and then fill up his vacations with faithful and intelligent teaching without lasting injury to his health. He may indeed go and sit in the school room without much injury; but this is not teaching.

We confess ourselves averse to the idea of making the student pay as much as possible, his own expenses. We are in favor of manual labor of some sort during term time,—we do not believe it safe to dispense with it, *in the case of either sex*, unless a large amount of recreation, of the athletic kind, is taken—and of teaching during vacation, just so far as will promote in the best possible degree, the health of body and mind, and no farther. Let the grand point in all our schools be to develope harmoniously in the best and highest degree, the bodily functions, intellectual faculties, and moral powers; and if in doing this, in the best manner, the avails of the labor of the student are of any value, he is fully entitled to them, to assist in defraying his expenses. But there is such a thing—and many young men have found it out when too late—as breaking down the constitution of body and mind by there efforts to pursue their studies, and at the same time defray their own expenses. We are in favor of that education which is secured by encountering and surmounting difficulties; but not in favor of that effort which if it do not break the neck of him who is its victim, breaks down his physical frame in general, and renders him not only crippled in body, but half idiotic in mind, for the remainder of his life.

Nor are we disposed to look with favor on that narrow minded feeling which, in educating a child looks primarily at the reputation of the parents, the teachers, the institution, or the sect with which he is connected, instead of looking first at the happiness and usefulness of the child himself? Against the idea af *saving money* to the parent, the school, the college, or the State *as a leading idea*, we enter our most earnest protest. Let money be "poured out like water," rather than diminish aught of a student's power or disposition to do that, in subsequent life, which it always is, or always should be, the great object of all education and instruction to accomplish.

Much is sometimes said of the benefits which college students, who go out and teach during vacations, confer on the community, 1, by making known the character, &c., of the college to which they belong, and 2, by acting upon the various neighborhoods in which they engage as a kind of missionaries. To this is also added the advantages the student derives to himself, both from the exercise of teaching, and from the preparation which it affords him for future usefulness. There is, however, quite a draw-back upon this. Few students from colleges and theological schools, succeed well in their labors as teachers, and we have sometimes doubted whether more harm than good might not be done in this way.

But to return to the subject of labor and study. Notwithstanding all the errors and mistakes which have been made by the friends of education in their endeavors to combine manual labor and study, we must still insist on its exceeding great importance especially to a large proportion of the young men of our country who find their way into the ministry. It has long appeared to us a matter of regret that the ministerial ranks could not, some how or other, be filled by young men of different physical characters from what we too often see. For though they may be eminently useful, for a short time, even when constitutionally feeble, and when their physical inefficiency has been increased by a mistaken education, still they are far less so than might be the case, did they possess, along with the same piety, a greater amount of physical vigor, either natural or acquired. We repeat it, we regret, exceedingly, that our candidates for the ministry cannot oftener be selected, not from the feeblest of their respective families, but from the more healthy and hardy; and we regret still more that it has never come to be regarded as an imperative duty to those who educate for the gospel ministry to educate the body, as effectually as the mind and soul. Why is it that our young men should have their constitution of body so effectually ruined by the time they get through their studies, and are just inducted into the ministry, and begin to feel their responsibilities, that they so often are crushed under their weight, and if not wholly lost to the church and to the world only have their lives prolonged to be a burden to themselves, and to that community which instead of sustaining them so much needs to be sustained by them?

Since commencing the foregoing remarks, we have met, in the American Quarterly Register, with a biographical sketch of the life and character of Jonathan P. Cushing, M. A., late President of Hampden Sydney College, which is so strikingly confirmatory of the views which we have advanced that no apology will be necessary for adverting to it.

Up to the end of his sixth year, the education of this excellent individual had been conducted exclusively by his mother. Whether he was over educated, or rendered precocious, we are not told by his biographer, but from his slender and consumptive shape, there is great reason to fear that this was the case. His mother dying at this time, and his father when he was about ten or eleven, he was placed on a farm; but disliking the employment, as boys of the temperament we have supposed him to possess often do, he left his guardian at 13, and became an apprentice to the saddler's trade. Here having more leisure for thought, as we understand his biographer to say, and being "much given to meditation," he at length began to look forward to a literary occupation, as a profession for life. It was not long before his mind was made up on the subject; and having an unusual share of energy and perseverance, he labored so hard as to be able, at eighteen years of age to "buy his time," as it is called, and enter an academy. But his excessive exertion to accomplish his object, joined to mental anxiety, either with or without a constitutional predisposition, had already in all probability sown the seeds of decline; for he had been at the academy only eighteen months, when "from want of health and want of relaxation he retired to his native town, and taught school for about the same length of time. Had he labored upon the farm he so much hated all this time, it is impos-

sible to say what might have been done in the way of restoring him to health; but of one thing we are fully assured, that in so far as the object of teaching is for the sake of relaxation merely, there cannot for young men like Mr. Cushing be a worse employment. But instead of working on the farm, or so far as we can learn using any active exercise at all, "he paid the greater part, if not all of the expenses of his education by the profits of his trade, at which he worked a portion of every day during the time he staid at Exeter." We shudder, involuntarily when we record this; so ominous of evil in such a course, to such a young man, whether the evil days come soon, or whether as Solomon says of certain evil works that sentence against him "is not executed speedily."

And what might have been easily enough predicted, soon came to pass. Before he was twenty-two, his health failed him, and he was threatened with pulmonary consumption. It is true the alarming symptoms were excited by sleeping one night in damp sheets; but the predisposition to pulmonary disease had in all probability existed. It is true, he seemed to recover; at least partially; but it was not without a risk that no young man ought to run. Instead of recovering in a natural and appropriate manner, he submitted himself to a course of powerful medicine, which his physician told him would hasten his end, if it did not happen to relieve him, saying that he "was determined to have a liberal education or die in the attempt." There can be no doubt that the experiment though temporarily successful, hastened his death. As yet, however, he had not made any public profession of being governed by christian motives or christian principles.

Soon after this temporary restoration, he entered Dartmouth College; where it seems he remained till he graduated; but his "sedentary habits and neglect of exercise" had so enfeebled his health while in college, that no sooner had he received the usual college honors, than he proceeded to the South to restore it. Here he soon became a tutor in Hampden Sydney College.—This was about the close of his twenty-fifth year. Sometime after this, on the death of Dr. Hoge, the President, he was appointed his successor. This place he filled from the age of twenty-nine, till his death, which happened when he was about forty-two years of age.

Though his health seemed greatly improved by a residence in Virginia, he had never been robust; and he was often—we believe nearly every year—obliged to take "relaxation" during the college vacation, by journeying among the mountains or elsewhere. Yet there is little doubt that the seeds of a mortal distemper still remained within him, for a slight cold only seemed sufficient, towards the end of his career, to throw him into a consumption, whose rapid progress nothing now could arrest.

It is exceedingly painful to follow out this narrative from the commencement to the end, without being convinced, at almost every step, of the errors of this excellent but ill-fated young man. We say *young* man; for he died at the very beginning of what might, in all probability, but for physical mismanagement, have been a career of great usefulness and happiness to himself, and to the world which so much needs his services.—What a blessing will right physical education confer on mankind when it can be brought, under right parental and medical direction, so to bear on the rising character of a young man like Jonathan P. Cushing, as to preserve him to the age of Franklin, with faculties unimpaired, and with bodily powers comparatively uninjured! What could not forty years of the active life of a man, thoroughly educated, accomplish?

From the Common School Journal.

COMMON SCHOOL LIBRARY.

"The Board of Education, of the Commonwealth of Massachusetts, has decided to cause to be prepared two series of volumes, particularly adapted to the capacities of the young—to be entitled

THE COMMON SCHOOL LIBRARY.

"The plan contemplates that these series shall consist of 50 volumes each; one to be of 12mo. size, about 400 pages each volume, and the other to be of 18mo. size, about 280 pages each.

"The publication of these volumes has been undertaken by Marsh, Capen & Lyon, and they have given notice that a number of volumes of both series are in press, and will be ready for delivery in the course of a few weeks.

"Individuals, distinguished by their learning, superior judgement and moral excellence, of different political parties and religious denominations, have been engaged to prepare and superintend these works; and it is stated that every volume must be approved by each individual member of the Board; that the Board is composed of gentlemen conspicuous for their talents and possessing in a high degree the confidence of the respective parties and denominations from which they were severally selected,—it is not only a sufficient guarantee to the public that nothing short of works of the highest order will be sanctioned, but also that the series will contain nothing objectionable to the members of any sect or party.

"A law was passed by the Massachusetts Legislature, 12th of April, 1837, authorizing an expenditure by each School District in the Commonwealth for the purchase of a District School Library.

"The North American Review thus speaks of the Library: 'It is understood that a series of volumes, approved by the Board of Education as suitable for Common School Libraries, is about to be published and sold at a moderate rate, plainly and substantially bound and placed in cases well adapted for convenient transportation, and afterwards to serve as the permanent place of deposite.

"It is highly desirable that every School District should avail itself of the law. These books being fitted for common use, would pass from the scholar into the family, and increase the interest of parents in the better education of their children, by giving them new views of its value.'

"The works are to be stereotyped in a uniform style, and the type will be large and clear. The paper is to be manufactured expressly for the series, and made of the most durable materials, and the binding will unite the important qualities of strength and beauty.

"Five or ten volumes of each series will be delivered at a time, and the publishers are under obligations to furnish the whole at the lowest possible price.

"There will be numerous Cuts and Engravings in such of the volumes as the subjects may require, and no expense will be spared to render the series equal, if not superior, to any publication in the world."

We copy the above from a circular of MARSH, CAPEN & LYON, of this city.

We deem this a very important undertaking; and should the Works intended for the series be prepared in the judicious manner that we have every reason for presuming they will be, from the knowledge we have of the character and qualifications of some of the gentlemen engaged as writers, they will form a valuable accession to our means for training up the young in the way they should go.

We are also gratified to have it in our power to state that the same Firm are making preparations for issuing a *Teachers' Library*, which, considering the existing deficiencies, will unquestionably prove as acceptable to the instructor, as the School Library will to the pupil and parent.

From the Connecticut Common School Journal.

PRACTICAL EDUCATION.

It is highly important that the teacher of a public school should not only put his pupils in possession of the rules of arithmetic, grammar, morals &c., but that he should prepare them for their ready use, their daily application, to the business of life. There is greater difficulty in accomplishing this end than some imagine.

In certain branches the task is not so difficult, and its success not so rare. In reading and writing, for example, it is more common to find youth qualified for the practical application of their school studies. This is greatly owing to the fact, that these branches are spontaneously applied to practical use before leaving school. The pupil writes letters to friends, he notes down problems in his ciphering book, or is called on to do writing at home. In reading, of course, the step to practical application is so convenient, that it is almost unavoidable. The child, often when scarcely more than an infant, begins his little course of reading, with the shop sign or the toy-book; and thus needs no particular instruction or incitement to apply his knowledge of letters.

But the case is far different with several other important branches. How many youth may there be, who, on engaging in business, do not find it necessary to betake themselves anew? They may have proceeded far in the rules, and possessed a creditable familiarity while engaged in the daily practise of them: but from the time when they begin to disuse them, they begin to forget them.

So in grammar. Even some of the children who have been most intelligent and proficient in that branch of study, have been found to set the rules at nought in conversation through life, and it is a plain fact, that our common schools, as at present conducted, are not of sufficient force to hold in check the language of the mass of the people.

If we turn to the geography and history, we shall find, that although these branches are much more extensively and better taught than they were thirty years ago, the effect is far less important in a practical point of view than could be desired, and ought to be expected. What youth, leaving the highest class in a public school, and proceeding on a journey in almost any direction, does not find that his conceptions on these subjects have been extremely crude, if not erroneous? How many a person of such a description has

been glad to correct his own views by those of a more practical though less instructed fellow traveller.

Now we do not intend to have it understood, that such results are not often produced by imperfect methods of instruction in private schools, academies, and even colleges. We are certain of the contrary. We wish however that all our common schools may soon enjoy the advantages of improvements which might be introduced; and have no doubt, that a suggestion will be sufficient to direct the attention of some teachers to it, and to lead them to measures appropriate to the end. Important elementary principles, having been once clearly embraced, often, and we hope generally, will be retained, not only through school days, but for life.

ON THE ENCOURAGEMENT OF LEARNING.

The following is taken from the first article in the February No. of the Baltimore Literary and Religious Magazine entitled, "Pater Patriæ.—February 22, 1732—1839". Its noble sentiments and eloquent diction would justify us in presenting it, even if it lay without the circumference of our wide circle. But as it does not, we are the more happy in affording our readers so rich a repast. The argument for learning deduced from the contrast between Rome and Carthage, is as resistless as the eloquence by which it is enforced. Had Carthage paid due attention to the cultivation of literature and science—had she abounded in schools, academies and colleges, *Punica fides* had never meant *base deceit*. But the glory of her achievements is transmitted to all future ages only on the historic page of her proud rival and haughty conqueror: and unquestionably, the picture drawn by so partial a hand, presents but a caricature of the original. Had she possessed a Marshall, her Washington might have excelled Fabius in prudence and eclipsed Scipio in courage and energy; and stood boldly forth on the page of history, the first general in the world.

No subject can be more important than the encouragement of learning; and it is perhaps one on which there is little ground for apprehension. Its process is slow, but irresistible. Sometimes, indeed, causes may operated to check, or for a season to arrest its advancement. It may slumber, but it is only to refresh its energies. Thus in that gloomy period of the world, emphatically called the dark ages, learning seemed almost banished from the earth, and the last ray of science well nigh extinguished. Yet the increased effulgence with which it burst upon mankind after its memorable revival proved the groundlessness of such apprehensions. After that tedious night, the human mind awakening as from a refreshing sleep; seemed to renew its vigor and take a higher aim. The sun of science, as if brightened by its long eclipse, shed upon the human understanding a stronger and steadier light; and "man was exalted in the scale of intellectual being."—Nor will this appear extraordinary to those who recollect the increased facilities for improvement and research which every successive generation derives from the labors of its predecessors. In this respect, says the eloquent and philosophic Detael, "ages become the inheritors of ages; generations start from the point at which preceding generations had stopped; and thinking philosophers form through the lapse of centuries, a chain of ideas which the hand of death does not interrupt." "In the last century," says Condoreet, "many years were necessary for comprehending what Archimedes and Hipparchus knew; but now a few years, under an able instructor, will carry the student beyond the enquiries of Leibnitz and Newton." And let any one follow the immense chain which connects the researches of Euler with those of a priest of Memphis; let him observe at each epoch how genius outstrips the present age, and is overtaken by mediocrity in the next; and he will perceive that nature has furnished us with such exhaustless means of abridging and facilitating our labor, that those simplifications by which the boundaries of knowledge are enlarged may never have an end. In this way, we may account for the constant accessions which are made to the stock of science, without instituting invidious comparisons between the endowments of different generations of men.

The effects of learning on the character and destenies of a people seems to have excited the attention and awakened the solicitude of our immortal Washington. Already distinguished for its military prowers, he panted to see his infant country disputing the palm of literary fame with the most cultivated states. To this end he projected and urged the establishment of a national University. He beheld in such an institution the surest promise of his country's glory; and wished it to be coeval with her political existence. In this project so worthy of his great mind he unhappily failed. The achievement was reserved for other men and other times; and each successive year adds to the subject increasing interest and clothes it with additional importance. The present indications are, that we may at least be indebted to the princely generosity of a noble minded foreigner, for the first foundations of such an institution.

We should aim at a high and lasting literary fame, by increasing the facilities of literary attainment, advancing its dignity and strengthening its inducements. Let us multply, enlarge and liberalise our institutions of learning. They are the radiant points of the nation. It is to the community of men of letters, trained within their walls—that we are to look for the respect of our cotemporaries. "Their writings are to be the depositaries of our national greatness." And they alone can shed that track of glory along the history of our age, which will rivet the admiration of posterity when intermediate generations shall have passed unregarded from the earth. Rome had her heroes and her patriots; so too had Carthage. But Rome had her poets, her orators, and her historians to commemorate her deeds, and make her name immortal; so had not Carthage. Hence the one has been handed down to succeeding ages, rich in all the achievements which philosophy could boast; and adorned with all the magnificence in which poesy and eloquence could array her; while the other is known mainly as the land of Hanibal, and rests an infamous immortality on the triumphs of her conqueror.

Such are some of the more important considerations which the subject suggests. Such are a few, out of the great variety of means subject to our control, by which we may maintain the grandeur of our empire. If it were appropriate, it would be easy to show that the ideas we have suggested, are clearly established by the practical influence and operation of our system. In such an attempt, it would be easy also to bring to our assistance the analogy of other countries, approaching somewhat to the degree of freedom enjoyed in our own; and show, that just in proportion to the nearness of their resemblance, have been the success, the wisdom and the happiness of their subjects. But even rejecting all such adventious aid, the brief history of our own country is conclusive on the subject. We may demand in vain a parallel to the general intelligence, prosperity and happiness of our citizens: and point with honest pride to the wonderful phenomenon, of a people emerging in half a century from the subordinate condition of a province, to equal rank with the mightiest nations.

If we should descend to individual examples, we have no cause to blush. The abode of liberty is the birth-place of genius. Who has surpased the sagacity of Franklin—the profound wisdom of Jefferson—the financial skill and cogent reasoning of Hamilton—the pure and classic pages of Madison? What jurist has excelled Marshall? What metaphysician is more acute than Edwards? Who has equalled the creative powers of Fulton? Why is the exquisite mechanical skill of Perkins promoted over native genius, in a foreign capitol? Why do American pictures adorn the galleries of Europe; or an American chart direct the mariner in his trackless wonderings? Who eclipsed the efforts of Pinkney, or rivalled the heaven-born eloquence of Henry?

But why need we multiply examples? Produce us, from the records of departed worth, or the ranks of living fame, crowded and illustrious as they are, another Washington; and we say to the land that gave him birth, follow the light of his example as a sacred pillar of fire and of a cloud. Follow his footsteps, purely, simply, and they will guide you through the wilderness of travel, to the Israel of your hopes and prayers; and place you by our side on the dazzling pinacle of renoun.

VETERINARY ART.

The VETERINARY is "a SCIENTIFIC ART" in the strictest sence of the term. It invites its votaries to the following studies, viz,—

1st. The different *species*, and various *races* of the domestic animals;—their different *breeds;*—the uses to which each breed is applicable;—the useful *crossings* of breeds;—and the most economical and best methods of *producing*, *rearing* and *feeding* each class and breed.

2nd. The *educating*, *training* and *fattening* certain domestic animals.

3rd. *Commercial jurisprudence*, as regards domestic animals; including the uses to which can be applied, to the best advantage, their *flesh*, *hides*, *offals of their hides*, *tallow*, *hair*, *wool*, *horns*, *teeth*, *hoofs*, *entrails*, *blood*, and *bones*.

4th. The study of the *outward forms* of domestic animals, pointing out their *beauties*, marks of *strength* and *speed*, and their *defects;* together with the methods of ascertaining their *ages*.

5th. The *internal structure* of domestic animals;—their *anatomy:* their *comparative anatomy;* and the most humane and economical methods of making use of their *speed* and *strength*.

6th. The various *foods* used for the nourishment of different domestic animals;—the different methods of *raising*, *curing* and *preserving* them with the greatest economy, and in the greatest abundance.

7th. The various *medicines* required for domestic animals;—the most approved methods of *raising*, *curing*, and *preserving*, those that are *botanical;*—a general knowledge of those that are *mineralogical;* together with the manner of *mix-*

ing, *preparing* and *administering* both those that are botanical and those that are mineralogical.

8th. The most effectual methods of *preserving* domestic animals from *contracting diseases;*—and the most approved means of *curing* those that contract diseases;—together with the methods used to prevent *contagion* and *infection* among them.

9th. The most approved plans for preserving domestic animals from *accidents* and *injuries*, and the performance of all kinds of *surgical operations* upon those that require them.

10th. The most approved methods of *shoeing* certain domestic animals; either generally, or when diseased or lame.

To teach the Veterinary Art with success in the United States, it would be necessary to have—

1st. An Agricultural enclosure of sufficient extent to cultivate upon a scale large enough for instruction, specimens of all the plants used in the nourishment of domestic animals; and also ground enough to keep the domestic animals, upon whose breeds or crossings of breeds, experiments are being performed.

2nd. A botanical garden, extensive enough to cultivate the plants used as medicines for the domestic animals.

3rd. College buildings, including an amphitheatre for the delivery of lectures,—school rooms —a gallery or museum room,—a library room,—a dissecting room,—a forgery,—hospitals for the experiment,—dormitories, a dining room, hospital rooms, and a kitchen for students, and apartments for the officers.

4th. The officers required would be:

One Director Professor.

Four Professors, viz.

1. of Anatomy.
2. of Botany.
3. Chemistry and Pharmacy.
4. Pathology, Surgery and Farriery.

Four Teachers, one Farrier' one Librarian and attendants.

5th. A library—a museum of anatomical preparations—a collection of minerals, and a herbarium.

Experience has proved that four years is longer term of study than is necessary, even in France, where the students are admitted at sixteen years of age, and with no other education than being able to read and write; American students of sixteen years would be much more advanced in education.

The Study of Agriculture, is recommended by a writer in the North American Review, in the following extract:

"Now, although the paramount importance of agricultural pursuits, over all others, is unquestioned; we suspect there is scarcely a school or college, in the country, where a single hour is devoted to the elucidation of their leading principles; and we doubt not, that many have finished their academical courses, able perhaps to repeat whole volumes of metaphisics in the words of the author, while they have not merely acquired no knowledge, but have formed no conceptions of those familiar operations of the farmer and gardener, to which they are indebted for their daily food. Surely some few days of the ten years pupilage, through which so many of our youth pass, might be profitably given to subjects so interesting, as well as so important, as these. —*Cultivator.*

TERRACULTURAL.

HIBERNATION OF INSECTS. —INSTINCT.—

In proceeding from examining the state of plants during winter, to the consideration of that of animals, the subject of Instinct forces itself on our attention. This is one of the most mysterious and wonderful of all the qualities inherent in organized beings, and, in its operations, exhibits so distinctly a Designing Cause, separate from the being which possesses it, as to be calculated, more perhaps than almost any other phenomenon, to carry to the enquiring mind a settled conviction of a supreme and intelligent Creator.

Instinct has been defined to be "the operation of the principle of organized life, by the exercise of certain natural powers, directed to the present or future good of the individual:" and it has been distinguished from reason, by considering the latter as "the operation of the principle of intellectual life, by the exercise of certain acquired powers, directed to the same end,"* This definition, without entering into the theory with which it is connected, seems sufficiently accurate to answer our present object.

Symptoms of an instinctive principle, as thus defined, are to be found in various productions of the vegetable world. Two or three instances of this kind may be mentioned:—

A strawberry offset, planted in a patch of sand will send forth almost the whole of its runners in the direction in which the proper soil lies nearest.

When a tree, which requires much moistur, has been planted in a dry soil, in the vicinity of water, it has been observed, that much the greated proportion of its roots have been directed toward the water.

Trees which have sprung up on a bare rock, will send out their roots in every direction, till they reach the soil below. Every one is familiar with this fact, who has frequented a wooded rocky district.

A fact of a similar nature, which is noticed, I think, by Lord Kames, and which I have myself witnessed, occurred at the Abbey of Sweetheart, in Galloway, where an ash-tree, growing on the wall which surrounds the abbey, after exhausting the small quantity of soil which had collected on its site, stopped from growing for a time, and seemed to unite all its strength in sending down a root to the ground. As soon as this root had established itself in the soil, the tree began again to flourish and increase, till it grew to a considerable size.

I have somewhere seen an account of a tree, which grew in the valley of the Earn, in Perthshire, if I mistake not, on a scanty soil, by the bank of a stream, over which, in its immediate vicinity, a foot-bridge, covered with turf, had been erected. The tree, taking advantage of this circumstance, pushed its roots through the dead turf of the bridge, till they fastened in the fertile soil, which happened to lie on the other side of the stream; and then, swelling and strengthening its new organ of communication, drew sufficient nourishment from this source to supply all the wants of its nature.

All facts of this kind, and many more might be mention, may, in my opinion, be clearly attributed to the principle of instinct.

* Good's "Book of Nature," vol. ii. p. 141.

Of instinct in animals, Dr. Good gives the following curious notices:—"All the different species of birds, in constructing their nests, not only adhere to a peculiar plan, but whenever they can obtain them, to peculiar kinds of materials; but, if these materials be not to be procured, the accommodating power of the instinctive principle directs them to others and suggests the best substitutes. Thus the redbreast, uniformly prefers oak leaves as a lining of her nest, wherever she can acquire them; but, if these be not to be had she supplies the want by most and hair. So, when the bird is of a small size, and the eggs are naturally numerous, the nest is always made proportionally warm, that the nestlings may all equally partake of the vivifying heat. Thus the wren, who lays from ten to eighteen eggs, constructs her little edifice with the greatest care, and of the warmest materials; while the plover and the eagle, whose eggs are so few, that the body may easily cover them, build with little solicitude, and sometimes content themselves with the naked cleft of a rock. And thus, too, in very cold winters in Lapland, the fond water-fowl will occasionally strip the down off its breast, to line its nest and protect its prageny. When a wasp, in attempting to transport a dead companion from the nest, finds the load too heavy, he cuts off its head, and carries it out in two portions."

These illustrations may suffice for the present, especially as by far the greater part of the facts relative to the animal creation, which I am about to adduce, must be referred to the same principle. Instinct, I may add, as in some of the above instances, does not unfrequently resemble reason, and it may pe united, and modified by, this quality; but it may always be distinguished from it by this, that its operations are generally perfect of their kind; that its powers are precisely the same in all generations; that they belong, nearly in an equal degree, to all individuals of the same species; and that its functions proceed blindly toward the attainment of an important object, the use and tendency of which is not perceived by the creature itself.

I have said, that this principle is probably calculated, better than any other natural phenomenon, to lead the mind to an acknowledgment of a Divine hand. Let us revert, for a few moments to this view.

In examining the general structure of the universe, we observe a few simple, though vast and comprehensive, powers adherent in matter, which by their universal and uniform operation, move Nature with the same regularity as if it were a mighty machine impelled by brute force: and hence the indolent or sceptical may be inclined to rest in the existence of these powers an ultimate fact, without seeking for an Intelligent Creator, from whom they emanated, and by whom they have been adjusted and regulated. The same thing may take place in contemplating the structure of organized bodies. So much of mere mechanical power enters into every process of their formation, growth and preservation, that although it does seem to be the blindness of utter stupidity to deny to these productions unequivocal marks of wise and beneficent design, it is possible to conceive, that, in tracing the mere physical laws by which their various properties are governed, the cold calculations of a contracted mind may proceed no farther. On turning from these appearances of external nature, to the oper-

ations of rational creatures, such minds may be led to admire the wisdom which contrives, and the power add skill which executes, the various plans of life, without directing one serious thought beyond the intelligence of the immediate agent. But it requires a still greater degree of obtuseness and obstinacy, to resist the evidence of a designing and bountiful Creator, in the wonders of instinct. These are altogether independent of reasoning powers, and impel organized beings by a sagacity, obviously not their own, to compass important ends. which, though essential to the welfare, and even to the very existence, not only of the individual, but of the species, could not, by any possibility, be within their contemplation, being far beyond the range of their limited faculties. Here, then, there is a designing cause, distinct from, and superior to, the agent: and this is the more clearly discernible, because its operations are governed by other than mere mechanical powers. "I look upon instinct," says Addison, "as upon the prineiple of gravitation in bodies, which is not to be explained by any known qualities inherent in the bodies themselves nor upon any laws of mechanism; but according to the best notions of the greatest philosophers; is an immediate impression from the First Mover and the Divine energy acting in the creatures; such an operation of the Supreme Being as that which determines all the portions of matter to their proper centre."

From the Maine Farmer.

PRODUCE OF THREE ACRES OF LAND.

We have been politely favoured by Mr. Dudley of Lyman, county of York, with the following statement of a crop which he took from three acres of land last fall.

It proves that old York County is not so far behind the spirit and improvements of the day, as some other parts of the State which we could name. This is a sandy loam, and had been mowed for five successive years. After taking the hay from it in the summer of 1837, he ploughed it. In the spring of 1838 he put upon it seventy loads of good compost manure, and planted it with corn beans, potatoes, ruta baga and pumpkins.

In the fall he gatherd 150 bushels of good sound ears of Indian corn, which would make 75 bushels of shelled corn; 7 bushels of beans; 132 bushels of potatoes; 305 bushels of ruta baga; 2 cords of pumpkins, and fodder from corn and ruta baga tops, equal to one ton of hay. The worth of this crop may be fairly estimated as follows.

Cr. By 150 bu. of ears corn,	$75,00
7 bu. of beans,	10,50
135 bu. potatoes,	40,00
306 bu. of ruta baga,	61,50
2 cords of pumpkins,	6'00
1 ton of fodder.	10,00
	$233,00
Cost of production as follows,	
Dr. To labour, including ploughing and harvesting,	$40,00
70 loads of compost,	70,00
Seed,	4,00
	$114,00
Balance,	$119,00

Leaving a nett profit of One hundred and nineteen dollars.

We have not reckoned in the taxes, nor the interest of the money on cost of the land and expenditures, but then on the other hand, it will be perceived that we have not said any thing of the balance of the manure still in the soil, and ready to push forward another crop. We have no doubt, although we do not know how retentive the soil may be of manure, or how easily it may part with it, there being much difference in soils in this respect, but we have no doubt that the manure put on will be felt through six successsve crops. But suppose we put the taxes and interest and benefit to the present crop against one half of the manure. We have then one half of it yet on hand, which is $35,00; deduct this from 114 dollars the cost, reduces it to 79 dollars, and raises the net profits thirty-five dollars more, or 154 dollars net profit from three acres of land! What better investment does a man want than this!

Would it be an unfair mode of reckoning the value of this land by the amount of interest which it pays at 6 per cent? One hundred and fifty-four dollars, if we mistake not, is the interest of $2566 66, or $855 52 cents per acre. How many acres there are in the State of Maine which may very easily be made to afford the interest of this sum in the shape of nett profits; and what a vast change it would make in the appearance and prospects of our State and the welfare of the people, if every farmer would put only *three* acres of his land in a condition to do as well.

AMERICAN SILK.

The signs are most auspicious that we are about to make a very important addition to the number and value of the products of American Industry, by adding *Silk* to the list of our staples. As a measure tending to embody and diffuse widely and most efficiently all information to be gathered on the growth and manufacture of silk, from the best sources at home and abroad, the late Convention at Baltimore unanimously recomended the establishment of a Journal to be devoted to these objects; and happily, as we think, for the success and usefulness of the measure, they have solicited Mr. Skinner, the founder of the American Farmer, and of the Turf Register, to become the editor of this national work. A portion of the Silk Journal, which is to consist of thirty-two pages monthly, will be set apart for the kindred subjects of agriculture, horticulture, and rural economy. The price is $2 per annum. Mr. Skinner, expressing his conviction that the *culture of silk* is destined to be, and that speedily, an object of profitable employment for much of the now unproductive labouring capacity of the country, and to add very largely to the wealth of the nation, has accepted the invitation of the Society to conduct the Journal with all his ability and attention, "consistently with a strict discharge of his official duties" as postmaster. The first number will appear in the course of the present month.

Another striking sign of the success of the silk culture is the offer of a wealthy house of Glasgow, in Scotland, to establish in Virginia a manufactory which shall demand annually $100,000 worth of raw silk.—*Nat. Intelligencer.*

VISIT YOUR BARNS.

Every good farmer will visit his barn frequently in the winter, let him have whom he may to tend it. If his boys tend it, they often want instruction; it is a business that requires experience and the judgment of riper years. If a farmer has in his employ one who is experienced, that takes care of his stock, he should by no means neglect to see how things are managed; if they are so well conducted that he can suggest no improvement, he may possibly learn something himself that will be useful. When boys, especially those that are young, have the whole charge of stock, some creatures often waste fodder, while others suffer for want of it, and some will frequently go without water, being driven from it by those that are more powerful and unruly; and when driven from the water they dread going again to that spot, and will suffer much rather than return.

If a farmer who has a long row of cattle without partitions between them, will go to his barn in five or ten minutes after his boys have fed them, he will find that those at the head have an abundance of fodder, while those at the foot are destitute. Each animal reaches towards his weaker fellow, takes hold of as much hay as possible and draws it towards himself; so that the whole range of cattle, so far as there is no partition to interrupt, reach towards the foot and draw the fodder towards the head. In this way, sometimes the unfortunate animals at the foot will get only a few mouthfuls of fodder. This evil is in some measure remedied by putting a large quantity of fodder at the foot, extending it so far that the lower animal can but just reach it. But the only proper method is to have partitions, so that there will be only two animals together between them, and the partition should be close to the head of the ruling animal, then he cannot get the hay beyond the reach of his neighbor. We have fed three cattle, laying the hay so that the head one had but very little, and a large quantity was before and below the lower animal, and then we watched their procedings, and they were no more commendable than the doings of some political parties in legislatures: in five minutes, even when they had a large *foddering*, the foot animal had not a mouthful left within his reach, while the master squandered much, and then had a plenty.

Washington, Jan. 14, 1839.

At the Patent Office here, I have observed a model of a mowing machine (invented by one of the clerks in the office) which, it is believed, will prove very valuable. It was tried the past season, and found to answer an excellent purpose. It requires one person and a horse to work it—the horse moving in the swarth previously cut. The cutter is constructed by first taking a narrow piece of board, four feet long, and making teeth upon one edge of it pointed in such a manner as that it will slide upon, without piercing, the ground—the teeth entering the grass. A steel plate, with teeth in the same manner, is riveted to the same, upon which another plate, also pointed with coarse teeth is made to move back and forward with great swiftness, as the machine moved forward; thus working somewhat upon the principle of shears. The part composed of wood, moving upon the ground the cutter, of course, is in no danger of coming in contact with stones; and can be guided at the will of the man "at the helm," even over the most uneven ground. It leaves the grass well spread. Cutting a swarth four feet in width; from twelve to fifteen acres a day, it is believed, may be mowed with one machine. The cost of a single machine is about $150.

Maine Farmer.